

ABSTRACT

ORTHODONTIC SUSPENSION BRACKET AND METHOD OF USE

An orthodontic appliance for attachment to a tooth with adhesive is provided that resists debonding due to impact. The appliance is provided with
5 a compliant interface between the adhesive and the point of impact. An appliance may be provided with an orthodontic bracket suspended from a mechanical bonding base that is to be secured with adhesive to a tooth. The suspension provides compliant movement between the appliance and the mechanical bond. The movement is preferably resilient or elastic movement, but
10 may be plastic. The movement resists fracture of the adhesive by more slowly decelerating an impacting mass, reducing forces on the adhesive. A pad attached at its outer periphery to a mesh which leaves the inner central portion of the pad free may provide the compliance, so the pad exhibits flex, suspending the bracket to move with impacting masses, absorbing energy and reducing
15 forces transmitted to the adhesive. Compliance may also be provided by coating the bracket with elastomeric material, or coating the mechanical bonding base to which adhesive bonds. Low elastic modulus adhesive or elastic bracket tie wings can also provide the compliance. Tapered appliance surfaces, particularly facing the occlusal plane, deflect impacting objects to reduce forces.